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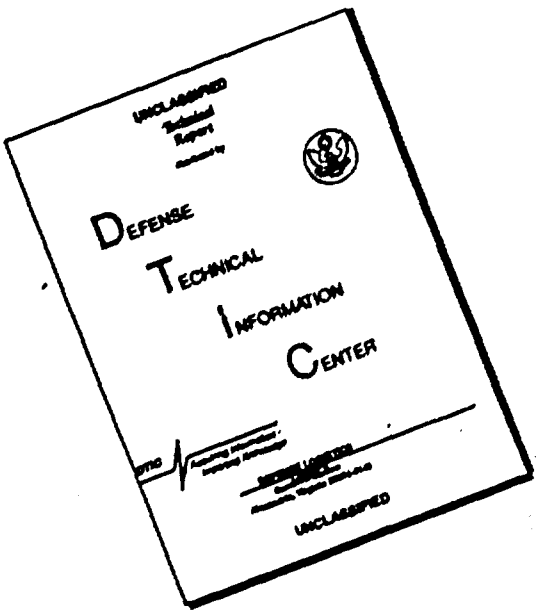

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United States
General Accounting Office
Washington, D.C. 20548

National Security and
International Affairs Division

B-240524

December 31, 1990

The Honorable Les Aspin
Chairman, Committee on Armed Services
House of Representatives

Dear Mr. Chairman:

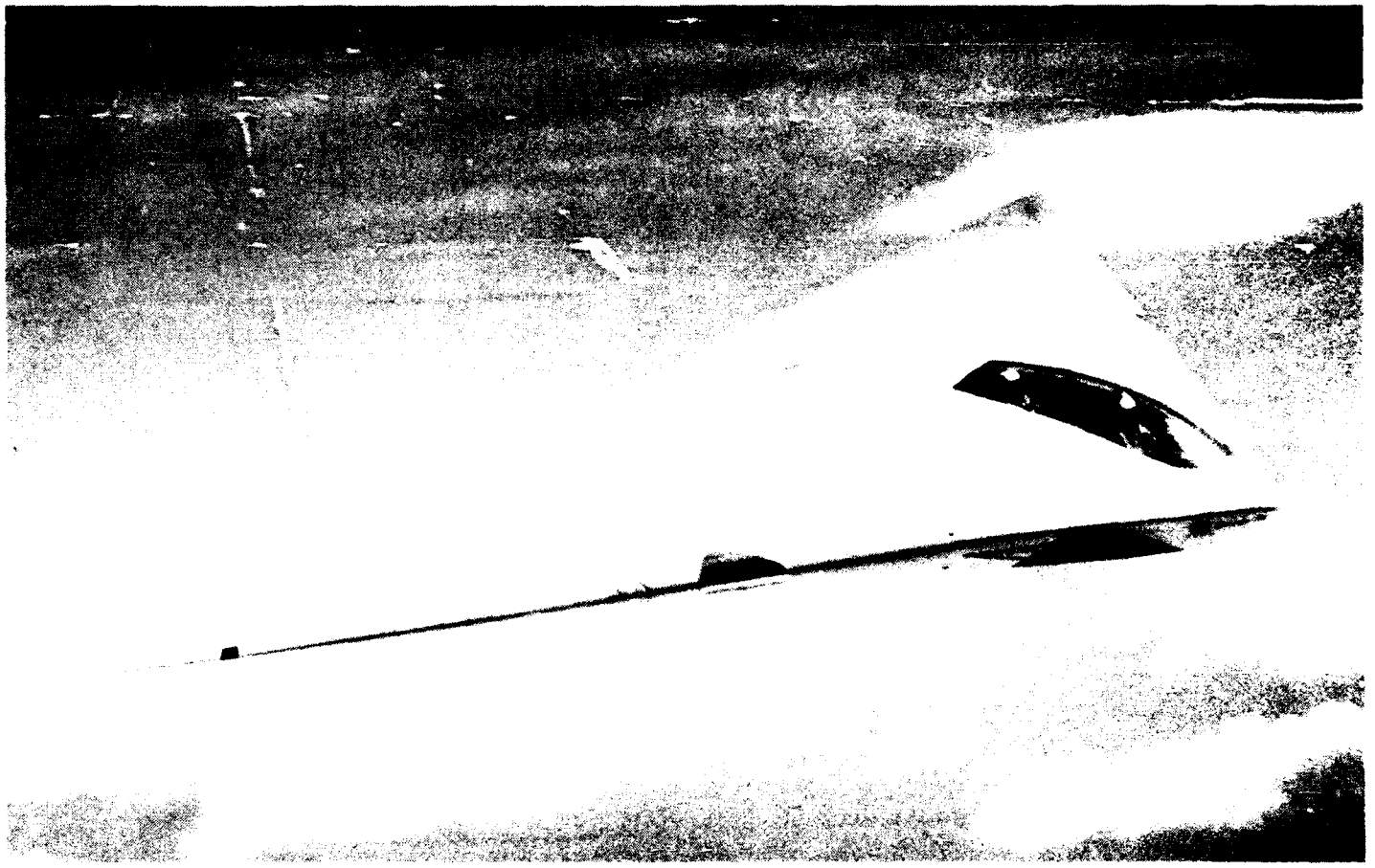
As you requested, we reviewed the Navy's (1) projected requirements and (2) cost estimates for the A-12 program. Our objectives did not include and we did not examine recent events that have overtaken the A-12 program. We do not know the ultimate impact these events will have on requirements or costs.

Background

The Navy's A-12 medium attack aircraft is being developed to replace its A-6E aircraft. The first version of the A-6, the A-6A, was introduced into the fleet in 1963 as the Navy's only day/night, all-weather, medium attack aircraft. The A-6 is also used to refuel other carrier-based aircraft. The latest version of the A-6, the A-6E, was introduced into the fleet in 1972. However, in the early 1980s wing cracks caused many of the A-6Es to be restricted to less demanding flight maneuvers or to be removed from flight status until appropriate repairs could be made. In fiscal year 1988, the Navy awarded a contract for the last A-6E production lot of eight aircraft to be delivered in 1991. The Navy has no plans to buy additional A-6Es. This issue was addressed in our recent classified report on the A-6E.

In 1988, the Navy awarded General Dynamics and McDonnell Douglas Aerospace Corporations a $4.8 billion fixed-price incentive contract for full-scale development of the A-12. The Navy expects that the A-12 will be significantly more capable and survivable against increasingly sophisticated integrated air defense systems being deployed by the Soviets and third world countries. Figures 1 and 2 show the A-12 and A-6E, respectively.

Figure 1: The A-12 Avenger



Source Navy

Figure 2: The A-6E Intruder

Source: Navy

In December 1989, the Secretary of Defense directed a Major Aircraft Review of four aircraft programs, including the A-12. During his April 26, 1990, testimony on the Major Aircraft Review, the Secretary of Defense projected that first flight of the A-12 would take place by early 1991 and that the full-scale development program would be completed within the current fixed-price incentive contract ceiling. On June 1, 1990, the contractor team advised the Navy that a significant slip occurred in the schedule for the first flight, the full-scale development effort would overrun the contract ceiling by an amount that the contractor team could not absorb, and certain performance specifications of the contract could not be met. On July 9, 1990, the Secretary of the

Navy ordered an inquiry to determine the facts and circumstances surrounding the variance between the current status of the A-12 program and representations made to the Office of the Secretary of Defense on behalf of the Navy regarding the program during the course of the Major Aircraft Review.

The investigation determined that the Navy and the Office of the Secretary of Defense had information that should have been considered during the Major Aircraft Review but was not. The investigation concluded that the Navy and the Office of the Secretary of Defense were negligent. This resulted in the removal of three high-level Navy officers involved with the A-12 program. Shortly thereafter, the Under Secretary of Defense for Acquisition resigned, and the Secretary of Defense gave the Navy until January 4, 1991, to show why the A-12 program should not be canceled.

Since the contractor team announced the significant slip in the A-12's development schedule, the first flight, originally planned for June 1990, has been delayed at least 2 years. The estimated cost of each A-12 has grown from approximately $87 million in December 1989 to more than $100 million. Program requirements have dropped from 858 to 620 aircraft.

Results in Brief

The Navy's projected requirements and cost estimates for the A-12 aircraft changed considerably from December 1989 to April 1990. These changes were based on decisions to lower the number of Navy aircraft carriers, which reduced A-12 requirements and total cost but increased the projected unit cost. Other factors point to possible further reductions in A-12 requirements. Also, some cost estimates have not been included in the cost projections, and others have changed.

In December 1989, the Navy reported a need for 858 A-12 aircraft to support 15 aircraft carriers with 15 carrier air wings. In April 1990, the Secretary of Defense testified that due to budget constraints the number of aircraft carriers would be reduced from 15 to no more than 14 and that requirements for the A-12 would be reduced to 620 aircraft. The Secretary also indicated that future budget constraints may bring about additional reductions in the number of aircraft carriers. Given the relationship between the number of aircraft carriers and the number of aircraft, this should further reduce A-12 requirements.

The increased capability, survivability, reliability, and maintainability of the A-12 over the A-6E may allow the Navy to accomplish the current

medium attack mission with fewer aircraft. Navy plans to use another aircraft, the S-3, for refueling could be limited because of a shortage of S-3s. However, shifting of any of the refueling mission from the medium attack community may reduce overall A-12 requirements.

The Navy's A-12 total program cost estimates do not include operation and support costs or the cost of developing and incorporating certain improvements to enhance the performance of most A-12 aircraft. In addition, changes to a number of cost projection variables have occurred. First, cost projections, which are based on guaranteed production lot prices, may be voided and renegotiated in a noncompetitive environment if certain funding levels are not obtained. Second, a decision to delay the Air Force's participation in the A-12 program is expected to place an additional cost burden of about $2.4 billion on the Navy. Third, changes in the inflation indexes used to project program cost have resulted in a program cost increase, and the indexes will likely change again during the program's life. Finally, increases in the A-12's weight and other developmental difficulties have increased costs and delayed first flight and initial deployment by more than a year.

A-12 Requirements Fluctuate

In December 1989, the Navy planned to buy 858 A-12s to support 15 aircraft carriers, with 15 carrier air wings, each with 20 A-12s. This total includes aircraft for maintenance, training, and attrition. The buy of 858 A-12s was projected to have a total cost of $74.3 billion and a program acquisition unit cost of $86.6 million. However, due to budget constraints, the Secretary of Defense initiated the Major Aircraft Review of four systems planned for procurement, including the A-12. On the basis of this study, the Secretary testified on April 26, 1990, that it would be necessary to reduce the number of aircraft carriers to no more than 14 through the rest of the century and A-12 requirements to 620. According to Navy officials, 620 A-12s would support 12 active and 1 reserve carrier air wings. The Secretary estimated that if only 620 A-12s are procured, total costs will be reduced to about $57 billion. (In the next section, we discuss issues that will contribute to raising projected A-12 program acquisition unit cost to over $100 million.) As of August 1990, the Navy had not received official guidance from the Secretary of Defense to change A-12 procurement plans. However, according to A-12 program office officials, a preliminary fiscal year 1992 budget based on 620 A-12s has been developed.

The Secretary also testified that "it may be necessary to scale back further our active aircraft carrier force structure in order to accommodate

DOD's [Department of Defense] declining future budgets." If the Navy reduces the number of its aircraft carriers to 12, we calculate that only 573 A-12s would be needed. Besides fewer aircraft carriers, other factors that affect requirements that should be considered are as follows.

On the basis of a 1984 carrier air wing composition study, the Navy plans to replace all current air wing configurations with the Roosevelt air wing, which calls for an increase in the number of A-6E aircraft from the 10 currently assigned to most aircraft carriers to 20. Accordingly, Navy plans call for 20 A-12s in each air wing to replace the A-6Es. However, the A-12 is planned to be significantly more capable and survivable than the A-6E, and it is expected to have double the reliability of the A-6E, while needing only half the maintenance staff-hours. Consequently, fewer A-12s may be required to perform the missions the A-6Es now accomplish.

Some aircraft in medium attack squadrons (KA-6Ds or A-6Es) perform refueling operations. On certain aircraft carriers, the S-3 aircraft performs part of that operation. The Navy told us during our review that it planned to accomplish refueling operations with the S-3 aircraft beginning in fiscal year 1994. The Navy now states that a shortage of S-3 aircraft will not allow it to shift all refueling to the S-3. The Navy continues to have refueling as an attack aircraft mission. Therefore, shifting of any of the refueling mission from medium attack may result in an overall reduction in A-12 requirements.

The Navy calculated its requirements for 858 A-12s based on using the aircraft for 30 years. According to Navy officials, it is likely the aircraft will be kept in service for 30 years, considering the history of the A-6 and the foreseeable budget constraints. However, the A-12 will be engineered to last only 20 years. Based on Navy figures, total requirements would be reduced by approximately 25 percent if the A-12 is kept in service for 20 years rather than 30 years because fewer replacement aircraft would be included in the program's requirements.

A-12 Costs Not Fully Defined

In addition to Navy requirements, there are a number of other changing variables, some of which are not included in cost projections, that affect A-12 costs. Two contractor teams submitted bids on the program. According to Navy officials, provisions in the contract require that certain minimum funding levels be maintained to preserve the pricing guarantees of certain production lots. However, recent technical difficulties

have slowed A-12 development and may impact the ability of the program to obtain the minimum funding needed to ensure that contract provisions beneficial to the U.S. government are maintained. Navy program officials state that insufficient funding will void the production lot price guarantees in the contract and allow the contractors to renegotiate costs and specifications in a noncompetitive environment. They believe this will result in a significant increase in the cost of the A-12 program.

Navy A-12 cost projections assume that the Air Force will procure a version of the A-12—the Advanced Tactical Aircraft (ATA)—beginning in fiscal year 1993 and will share in nonrecurring costs related to A-12 production. The total buy for the Air Force is projected to be 400 aircraft. According to the Navy, the Air Force agreed to a 50/50 split of nonrecurring costs, such as tooling, for those years in which the Air Force participates. However, the Secretary of Defense testified that (1) because of a change in the threat and possible delays in the deployment of Soviet air defense systems and (2) because the F-15Es and F-111s, which the ATA will replace, will not reach the end of their service lives until after the turn of the century, the Air Force would not begin buying the ATA until fiscal year 1998 or later. The Navy estimates that its costs will increase by about $2.4 billion with delayed Air Force participation because these nonrecurring costs, which are highest early in the program, will now be funded by the Navy alone.

The Navy originally planned to procure 48 A-12 aircraft annually. The Secretary of Defense, in his 1990 testimony, proposed reducing the yearly production rate to 36 A-12s. Navy A-12 cost estimates assumed there would be competition between the two prime contractors as a means of controlling cost. The Navy believes that an A-12 production level of 36 aircraft per year may allow it to compete the work load between the two contractors, but total A-12 program costs will increase by about $1 billion. However, these officials state that further reductions in annual production levels will not allow them to compete the A-12 work load. According to Navy officials, the contractors have expressed an interest in not competing the A-12 between them. If this occurs, current A-12 cost estimates will have to be revised further.

DOD inflation indexes, which attempt to predict the level of inflation in future years, are applied to current program costs to calculate A-12 costs. An increase in projected inflation rates between fiscal years 1988

and 1989 resulted in an $11.5 million increase in A-12 program acquisition unit cost.[1] If A-12s are in production for many years as currently planned, further changes in the inflation indexes may occur, which could affect the cost of the A-12.

According to Navy officials, problems in maintaining the planned weight of the A-12 and in manufacturing the A-12 have resulted in program delays and cost increases. According to Navy estimates, weight growth increased program acquisition unit costs by $8 million from fiscal years 1988 to 1989. Attempts to control weight growth and other production difficulties have delayed the first flight and fleet introduction of the A-12 by more than a year. Navy officials are concerned that the A-12's weight will increase further and that other manufacturing problems may cause additional program delays. If these problems continue, the assumptions used to project initial production costs will change, making future production cost estimates invalid.

Total program acquisition cost estimates are important to decisionmakers who must make budget and program decisions. Yet, A-12 program estimates do not include total operation and support or preplanned product improvement costs. The Navy has not finalized an estimate for operation and support costs for 620 aircraft, but for a total program buy of 858 aircraft it projected operation and support costs of $28.7 billion in fiscal year 1990 dollars. Further, all cost estimates to date are for the baseline A-12. The Navy has identified, partially estimated, but not reported as part of A-12 costs the amount needed to develop, incorporate, and support preplanned product improvements to enhance performance in the A 12 fleet. The costs of these upgrades, which are expected to be significant, will add to the total cost of the program.

Recommendation

We recommend that the Secretary of Defense update A-12 program requirements and cost estimates and periodically provide the Congress with the latest information needed to make decisions on A-12 procurement. In updating A-12 requirements and cost information, the Secretary should consider the possibility of further reductions in the number of aircraft carriers from the 14 currently in the fleet to 12 or fewer. He should also consider the possibility of using fewer than 20 A-12s in each

[1] This cost equals the total estimated cost for research, development, test, and evaluation; procurement; acquisition-related operations and maintenance; and system-specific military construction for the acquisition program, divided by the program acquisition quantity.

air wing, given the A-12's increased capability, survivability, maintainability, and reliability over the A-6Es and the transfer of a portion of the refueling mission to the S-3 or other aircraft.

In reporting A-12 costs, the Secretary should include all expenditures associated with the procurement and ownership of the aircraft, including

- total A-12 operation and support costs and
- the development and introduction of preplanned product improvements to the A-12 fleet.

Further, in calculating and reporting A-12 costs, the Secretary should recognize the potential cost impact of

- losing the competitively obtained prices for the A-12 aircraft,
- delaying the procurement of the Air Force version,
- lowering the A-12 production rate from 48 to 36 aircraft per year and possibly losing the ability to compete production, and
- delaying the A-12's first flight and fleet introduction schedules.

Agency Comments and Our Evaluation

The focus of this report and the intent of its recommendations is that the Navy should provide the Congress with the latest information to make informed judgments on the A-12 program. DOD's response that it either partially concurs or does not concur with most of the report centers on the availability of current program data in the Selected Acquisition Reports that DOD submits to the Congress. Since 1969, Selected Acquisition Reports have been the primary means by which DOD informs the Congress of the status of major weapon system acquisitions.

DOD said that its June 1990 Selected Acquisition Report incorporated all cost impacts that were quantifiable at the time. However, the June 1990 Selected Acquisition Report was not transmitted to the Congress until October 29, 1990. The House and the Senate had already passed the Defense Appropriation bill on October 25 and 26, respectively, and adjourned on October 28, 1990. Thus, the latest detailed information included in the Selected Acquisition Report was not available to the Congress before it finished debates on the defense budget.

The previous Selected Acquisition Report, dated December 1989, which was the most current report available at the time of congressional deliberations, was transmitted to the Congress on April 25, 1990. It showed

an inventory requirement of 858 aircraft and included detailed program data based on that number. This was 1 day before the Secretary of Defense testified that A-12 requirements were reduced to 620 as a result of the Major Aircraft Review.

The December 1989 Selected Acquisition Report also showed that the A-12's first flight was scheduled for June 1990. At about that same time, it was unofficially reported that the first flight was slipping to December 1990. However, shortly after the Secretary of Defense's testimony the first flight was slipped further to June 1992. As these examples show, the official program reporting to the Congress has not been timely, and the data available have not accurately reflected the condition of the program. A subsequent DOD investigation determined that the Navy and the Office of the Secretary of Defense had information that should have been considered during the Major Aircraft Review but was not. The investigation concluded that the Navy and the Office of the Secretary of Defense were negligent. This resulted in the removal of three high-level Navy officers involved with the A-12 program. Shortly afterward, the Under Secretary of Defense for Acquisition resigned.

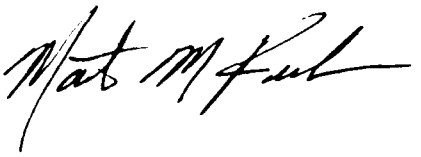
We reported that the Secretary of Defense reduced A-12 requirements to 620 aircraft after the Major Aircraft Review and that this requirement was based on supporting 14 aircraft carriers. DOD's response indicated that the Secretary's decreased requirement was based on support for 12 carriers. We believe the Secretary meant 14 carriers and Navy officials, with whom we discussed this point at the time, agreed that the Secretary referred to 14 carriers. In fact, DOD's response seems to agree with this point when it states that the inventory requirement of 620 A-12s is based on 12 deployable carriers, 1 carrier in overhaul, and 1 training carrier. Our point is that if the number of carriers is reduced below 14, there could be further reductions in A-12 requirements.

The Navy believes that the A-12 will be more survivable, reliable, maintainable, and less vulnerable than the A-6E it will replace. On the basis of the Navy's assessment, we concluded that the Navy might not need to replace A-6Es on a one-for-one basis with A-12s. DOD did not agree with our rationale, but it did state that reduced requirements were being considered based on other factors. We continue to believe the above-mentioned factors should also be considered in setting A-12 requirements. DOD's comments appear in appendix II.

Our objectives, scope, and methodology are described in appendix I. We plan no further distribution of this report until 7 days from its issue date. At that time, we will send copies to the Chairmen, Senate Committee on Armed Services and Senate and House Committees on Appropriations; the Secretaries of Defense, the Air Force, and the Navy; and the Director, Office of Management and Budget.

Please contact me at (202) 275-6504 if you or your staff have any questions concerning this report. Major contributors to this report are listed in appendix III.

Sincerely yours,



Martin M Ferber
Director, Navy Issues

Objectives, Scope, and Methodology

Our objectives were to examine the Navy's (1) projected requirements and (2) cost estimates for the A-12 aircraft. In performing this review, we examined documents and interviewed officials at the following locations:

- A-12 Project Office, Washington, D.C., to obtain data on A-12 cost, requirements, schedule, and performance;
- Office of the Under Secretary of Defense for Acquisition, Washington, D.C., to obtain data on the conduct and results of the Major Aircraft Review;
- Office of the Chief of Naval Operations, Washington, D.C., to examine A-12 requirements;
- Naval Strike Warfare Center, Fallon, Nevada, to obtain information on the need for and required operating characteristics of the A-12 from the perspective of fleet operators; and
- General Dynamics Corporation, Fort Worth, Texas, and McDonnell Douglas Aerospace Corporation, St. Louis, Missouri, to collect data on the cost and progress of their contractual A-12 development efforts.

Our review was performed between August 1989 and July 1990 in accordance with generally accepted government auditing standards.

Comments From the Department of Defense

DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING

WASHINGTON, DC 20301-3010

December 4, 1990

Mr. Frank C. Conahan
Assistant Comptroller General
National Security and International
Affairs Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Conahan;

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) Draft Report, "NAVY A-12: Cost and Requirements", dated October 15, 1990 (GAO Code 394325/OSD Case 8506). The report serves to apprise Congress of the factors affecting inventory requirements and costs of the Navy A-12 aircraft based on the timeframe of the GAO analysis. The Department has reviewed the findings and recommendations attached and partially concurs or nonconcurs with most of the report, but recognizes that the A-12 program has gone through a number of recent changes and that the June 30, 1990 Selected Acquisition Report was not available to the GAO until after its report had been prepared.

The A-12 inventory requirement, as stated in the December 31, 1989 Selected Acquisition Report, was for 858 A-12s to fill 14 active and 2 reserve Navy Roosevelt Air Wings (20 A-12s each) and 5 Marine Squadrons (10 A-12s each) for 30 years. The Secretary testified during the Major Aircraft Review that about 620 A-12s would be required for 12 carriers with no Marine Corps requirement, but no specific schedule for reducing to 12 carriers was provided and the Secretary left open the option to revisit carrier force structure. The draft GAO report incorrectly implies that the 620 A-12s refer to 14 carriers and that further reductions in the numbers of A-12s are possible, as carriers are further reduced below 14. Additionally, the GAO report makes no mention of the relationship between the total number of carriers, "deployable" carriers, and assigned air wings. The Navy long range planning to conform to the Secretary's April 26, 1990 Congressional testimony is to reduce the force structure to 12 deployable carriers; one carrier in comprehensive overhaul, refueling or Service Life Extension Program; and the training carrier.

The report also suggests that further reductions in A-12s may be appropriate because the A-12 is more capable, survivable, reliable, and maintainable than the A-6. While it is true the

A-12 is a significant improvement over the A-6, there are a number of other factors that must be considered in determining the number of each type of aircraft assigned to an air wing. Those factors include changes in threat, aircraft missions, warfighting requirements, and air wing composition. The requirement for effective and affordable use of the carrier deck space in order to optimize the fighting potential of the carrier battle group is the only constant. As directed by the Defense Planning Resources Board, the Navy is conducting a study to determine the most cost effective carrier air wing composition. The results will be incorporated into the rebaselining of the A-12 program at the Defense Acquisition Board program review.

The report appears to imply that the Navy has not recognized or reported all A-12 program costs or cost growth. The GAO report reflects A-12 cost growth due to the Major Aircraft Review decisions in the spring and summer timeframe. The June 1990 A-12 Selected Acquisition Report incorporates cost impacts identified within the GAO report that were quantifiable at the time the Selected Acquisition Report was prepared.

Detailed comments on the GAO findings and recommendations are enclosed. The Department appreciates the opportunity to review the report in draft form.

Sincerely,

Charles M. Herzfeld

Charles M. Herzfeld

Enclosure

GAO DRAFT REPORT - DATED OCTOBER 15, 1990
(GAO CODE 394325) OSD CASE 8506

"NAVY A-12: COST AND REQUIREMENTS"

Department of Defense Comments

* * * * *

FINDINGS

- **FINDING A: Status of A-6 Aircraft.** The GAO reported that the A-6A first was introduced into the fleet in 1963 as the Navy's only day/night, all weather, medium attack aircraft, and the latest version, the A-6E, was introduced in to the fleet in 1972. The GAO noted that the A-6 is also used to refuel other carrier based aircraft. The GAO found, however, that in the early 1980s, wing cracks caused many of the A-6Es to be restricted to less demanding flight maneuvers or to be removed from flight status until appropriate repairs could be made. The GAO reported that, in FY 1988, the Navy awarded a contract for the last A-6E production lot of eight aircraft to be delivered in 1991--and the Navy has no plans to buy additional A-6Es. The GAO observed that the A-12 will replace the A-6. The GAO noted that awarding the A-12 contract, while also continuing to procure A-6Es, was due in part to the uncertainty of fielding the A-12. (pp. 1-2/GAO Draft Report)

Now on p. 1

DoD RESPONSE: Partially Concur.

-- With respect to the flight status of the A-6E, once an A-6E uses 67 percent of its wing life and is restricted to a maximum of 3 Gs, it remains restricted (i.e., not combat-capable) until retired or until the aircraft is re-winged. Also, the Navy may need to procure additional A-6 composite wings in order to solve its critical near-term inventory shortfall, particularly if the A-12 Initial Operational Capability slips.

-- The Navy continued to procure A-6 aircraft after A-12 contract award because the Medium Attack inventory was still well below requirement, not because of any uncertainty in fielding the A-12.

- **FINDING B: A-12 Requirements Fluctuate.** The GAO reported that, in December 1989, the Navy reported a need for 858 A-12 aircraft to support 15 aircraft carriers with 15 carrier air wings. The GAO observed, however, that due to budget constraints, the Secretary of Defense initiated a major aircraft review of four systems planned for procurement, including the A-12. The GAO noted that, in April 1990, the Secretary of Defense testified that the number of aircraft carriers would be reduced from 15 to 14 and that requirements for the A-12 would be reduced to

Enclosure

620 aircraft. The GAO also noted that, according to Navy officials, the 620 A-12 aircraft would support 12 active and one reserve carrier air wings. The GAO found, however, that as of August 1990, the Navy had not received official guidance from the Secretary of Defense to change A-12 procurement plans. The GAO further noted that the Secretary of Defense had also indicated that future budget constraints might bring about additional reductions in the number of aircraft carriers. The GAO calculated that, if the Navy reduced the number of its aircraft carriers to just 12, only 573 A-12 aircraft would be needed.

The GAO speculated that the increased capability, survivability, reliability, and maintainability of the A-12 aircraft over the A-6E may allow the Navy to accomplish the current medium attack mission with fewer aircraft. The GAO also found that, beginning in FY 1994, current Navy plans are for the S-3 aircraft to perform all refueling operations--which may eliminate the need for additional A-12s to perform refueling. In addition, the GAO found that the Navy calculated its requirements for the initial 858 A-12 aircraft based on using the aircraft for 30 years; however, the A-12 will be engineered to last only 20 years. Based on Navy figures, the GAO concluded that total requirements would be reduced by approximately 25 percent, if the A-12 is kept in service for 20 years rather than 30 years--because fewer replacement aircraft would be included in the program requirements. *(pp. 2-6/GAO Draft Report)*

Now on pp. 4-6

DoD RESPONSE: Nonconcur.

-- The 858 total A-12s were needed to support 16 Navy air wings and five Marine Corps A-12 squadrons, not 15 carriers with 15 air wings, as stated by the GAO. Also, the Secretary of Defense equated 12 carriers (vice 14) and no Marine Corps participation with the reduction to 620 A-12s and indicated that no final decision on carrier force structure had been made.

-- The GAO implies that A-12s can replace A-6s based on some ratio of increased capability, survivability, reliability, and maintainability. That is not the case. The Navy is considering a reduced A-12 requirement, but it is based on the most cost effective utilization of the carrier deck space. The recommended number of A-12s per air wing will be reflected in a change in the total A-12 inventory requirement.

-- The S-3 aircraft will not perform "all" refueling operations. The S-3 is not available in sufficient numbers to meet the air wing refueling requirements and it is incapable of flying at the high tactical airspeeds characteristic of tactical strike aircraft. In addition, there are no dedicated "refueling mission" A-12s, so additional aircraft will not be procured for that mission area.

-- The GAO should also recognize that the development/replacement

costs of a new aircraft must be taken into account, if the A-12 is used for only 20 years.

- **FINDING C: A-12 Costs Are Not Fully Defined.** The GAO found that the Navy total program cost estimates for the A-12 do not included operation and support costs--or the cost of developing and incorporating certain improvements to enhance the performance of most of the A-12 aircraft. In addition, the GAO observed that changes to a number of cost projection variables have occurred since the estimates were prepared.

  First, the GAO found that current cost projections, which are based on competitively obtained prices, may be voided and renegotiated in a noncompetitive environment if certain funding levels are not obtained. The GAO noted it is the Navy position that the reduction in yearly production rates from 48 to 36 may still allow competition in production, but will cost about $1.03 billion more. The GAO also reported, however, that according to Navy officials, a further reduction in the rate will not allow the workload to be competed--and that the contractors have expresses an interest in not competing. The GAO concluded that a lack of competition would require a further revision of estimated costs.

  Second, the GAO found that Navy A-12 cost projections assume that the Air Force will procure a version of the A-12--the Advanced Tactical Aircraft--beginning in FY 1993 and will split 50/50 nonrecurring cost related to A-12 production. The GAO observed, however, that the Secretary of Defense testified that the Air Force would not begin buying the Advanced Tactical Aircraft until FY 1998 or later. The GAO noted the Navy estimates that its costs will increase by about $2.4 billion with delayed Air Force participation because the nonrecurring costs, which are highest early in the program, will now be funded by the Navy alone.

  Third, the GAO found that an increase in projected inflation rates between FY 1988 and FY 1989 resulted in an $11.5 million increase in A-12 program acquisition unit cost. The GAO observed that, if the A-12 aircraft are in production for many years--as currently planned--further changes in the inflation indices may occur, which could also affect the cost of the A-12.

  Finally, the GAO reported that increases in the weight of the A-12 aircraft, as well as other developmental difficulties, have increased costs and delayed first flight and initial deployment by approximately one year.

  The GAO concluded that total program cost estimates are important to decision makers who must make budget and program decisions--yet the A-12 total program cost estimates do not include total operation and support or preplanned product improvement costs. The GAO noted that the Navy has yet not finalized an estimate for operation and support costs for the 620 aircraft. (pp. 3-4,

Now on pp. 6-8

//pp. 6-10/GAO Draft Report)

DoD RESPONSE: Partially Concur.

-- The finding appears to imply that the Navy has not recognized or reported all A-12 program costs or cost growth. The June 1990 A-12 Selected Acquisition Report incorporates cost impacts identified within the GAO report that were quantifiable at the time the Selected Acquisition Report was prepared. In addition, A-12 acquisition related costs will be incorporated as they are identified.

-- The statement regarding competition is correct, except that elimination of airframe/engine competition and deferral of the top 29 cost component competition to coincide with Air Force production remains viable and will be considered during the DoD A-12 Program Review. The effect of reduced competition has already been included in program cost estimates and is reflected in the June 1990 Selected Acquisition Report.

-- The statement regarding increased Navy costs is correct except that nonrecurring tooling requirements is the responsibility of the Service causing the increase and, therefore, will not be split 50/50. The cost increase to the Navy is primarily related to having to procure more aircraft earlier in the program without the increased quantity and learning curve benefits the earlier Air Force production program would have provided.

-- The statement regarding the general effect of inflation is correct. The specific $11.5 million increase due to inflation effects between FY 1988 and FY 1989 cannot, however, be substantiated.

* * * * *

RECOMMENDATIONS

Now on p. 8

- **RECOMMENDATION 1:** The GAO recommended that the Secretary of the Navy update the A-12 program requirements and cost estimates, and periodically provide the Congress with the latest information needed to make decisions related to A-12 procurement. (p. 10/GAO Draft Report)

  DoD RESPONSE: Concur. The recommendation is, however, essentially moot. While initially considered a highly sensitive classified program, the A-12 has been reported as a special access Selected Acquisition Report since 1988, in compliance with section 127 of the National Defense Authorization Act for fiscal years 88-89. The June 1990 Selected Acquisition Report incorporates all cost impacts identified within the GAO report that were quantifiable at that time. The DoD is currently

reviewing the A-12 program and the outcome will serve as the basis for new baseline requirements and cost estimates to be reported in the December 31, 1990 Selected Acquisition Report. The Deputy Director, Acquisition Policy and Program Integration (Cost Management) is responsible for monitoring compliance.

- **RECOMMENDATION 2**: The GAO recommended that, in updating the A-12 requirements and cost information, the Secretary of the Navy consider the possibility of further reductions in the number of aircraft carriers--from the 14 currently in the fleet to 12 or fewer. (p. 10/GAO Draft Report)

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DoD RESPONSE: **Nonconcur.** First of all, force level decisions (such as suggested in this recommendation) are made at the DoD level and proposed to the Congress in the President's budget. Second, the Secretary already determined, during his Major Aircraft Review, that 620 A-12 aircraft would be required for 12 deployable carriers.

- **RECOMMENDATION 3**: The GAO recommended that the Secretary of the Navy also consider the possibility of using fewer that 20 A-12s in each air wing, given the increased A-12 capability, survivability, maintainability, and reliability over the A-6Es--and the planned FY 1994 transfer of the refueling mission to the S-3 aircraft. (p. 10/GAO Draft Report)

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DoD RESPONSE: **Partially concur.** The Secretary of the Navy is conducting a Defense Planning Resources Board-directed study to consider changes from the Roosevelt Air Wing configuration (20 A-12s), but not for the reasons suggested in the recommendation. The air wing mix is based on optimizing the fighting potential of the carrier battle group and factors being considered include threat, affordability, aircraft missions, warfighting requirements, and air wing composition. As discussed in the DoD response to Finding B, the refueling mission cannot be transferred completely to the S-3.

- **RECOMMENDATION 4**: The GAO recommended that, in reporting the A-12 costs, the Secretary of the Navy include all expenditures associated with the procurement and ownership of the aircraft, including the following:
  - total A-12 operation and support costs; and
  - the development and introduction of preplanned product improvements to the A-12 fleet. (pp,. 10-11/GAO Draft Report)

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DoD RESPONSE: **Partially Concur.** The Secretary of the Navy will continue to provide acquisition, and operating and support cost

data to the Congress through Selected Acquisition Reporting and the budget process. In addition, A-12 acquisition related costs, such as costs for preplanned product improvements, will be incorporated as they are identified. The Deputy Director, Acquisition Policy and Program Integration (Cost Management), within the Office of the Under Secretary of Defense for Acquisition, will monitor A-12 Selected Acquisition Reports to ensure that all costs are properly reported and that any additional data required are included.

- **RECOMMENDATION 5:** The GAO recommended that, in calculating and reporting A-12 costs, the Secretary of the Navy should recognize the potential cost impact of the following:

  - losing the competitively obtained prices for the A-12 aircraft,
  - the delay in procurement of the Air Force version;
  - lowering the A-12 production rate from 48 to 36 aircraft per year and possibly losing the ability to compete production; and
  - delays in the first flight of the A-12 aircraft and fleet introduction schedules. (p. 11/GAO Draft Report)

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DoD RESPONSE: **Partially Concur.** The Navy already adjusted costs caused by the Major Aircraft Review decisions, such as the delayed Air Force procurement, delay in first flight, and production rate/quantity reductions. Effects of losing the competitively obtained "not-to-exceed" options currently are being evaluated by the DoD. The Defense Acquisition Board is scheduled to review the A-12 program and the results will be reflected in subsequent Selected Acquisition Reports as appropriate.

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